



LNG Linear slot diffusers

The linear slot diffusers of the **LNG** series have been designed to combine aesthetics with technical performance in HVAC systems.

- Adjustable vanes to modify the air direction without changing the air flow.
- False ceiling or suspended from the ceiling mounting.
- Optimum performance in CAV or VAV systems.
- Designed for installations between 2.6 and 4 m high, with a temperature differential of up to 12 C°.
- Suitable for both, air supply and return.

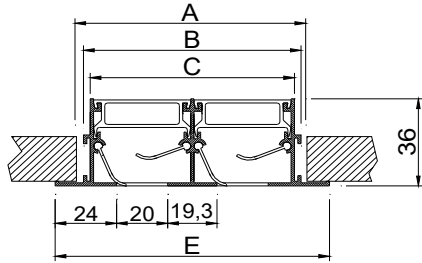
Product advantages

- Allows the formation of continuous diffuser lines, with active and inactive zones, without breaking the aesthetic uniformity of the whole.
- MOD version for greater integration and quick assembly in modular ceiling.

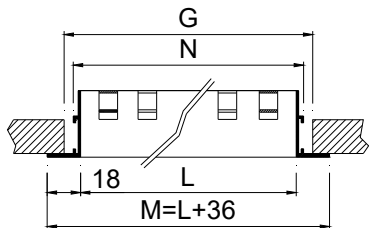


- Offices
- Hotels
- Residential

LNG-AR

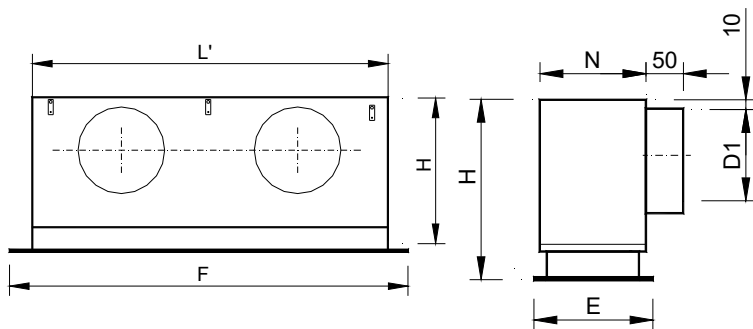


slots	E	A	B	C
1	68	55	47	40
2	107	95	86	80
3	147	134	125	119
4	186	173	165	159



L	M	N	G
500	536	507	516
1000	1036	1007	1016
1200	1236	1207	1216
1500	1536	1507	1516
2000	2036	2007	2016

LNG-MOD



MOD	slots	F	E	L'	H	D1	N
1200x300	1	1195	295	1145	256	1/158	69
1200x300	2	1195	295	1145	256	1/158	108
1200x300	3	1195	295	1145	296	2/198	147
1200x300	4	1195	295	1145	296	2/198	186
1350x300	1	1345	295	1295	256	1/158	69
1350x300	2	1345	295	1295	256	1/158	108
1350x300	3	1345	295	1295	296	2/198	147
1350x300	4	1345	295	1295	296	2/198	186

CLASSIFICATION

LNG-AR Diffuser with end borders included.

Suitable for lengths ≤ 2 m.

...-ARI Diffuser with an end border on the left side, required to form lines >2 m.

...-ARD Diffuser with an end border on the right side, required to form lines >2 m.

...-INT Diffuser without end borders, required to form lines > 4 m.

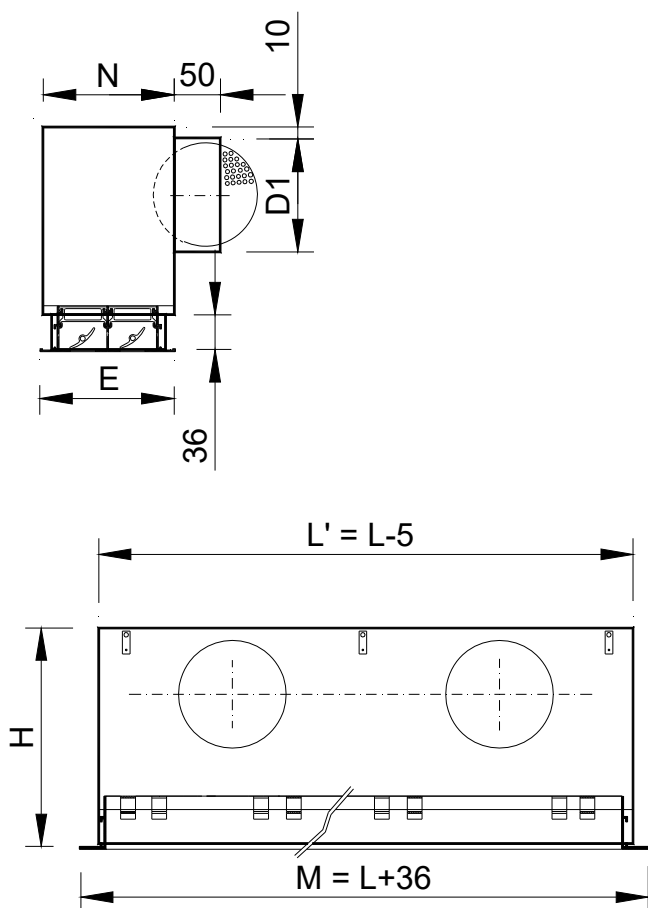
(In case of needing sections of equal length, it must be indicated)

LNG-MOD Modular linear diffuser. Specially designed to replace a false ceiling tile.

MATERIAL

Diffuser constructed from aluminium and deflection vanes from aluminium in black colour.

LNG-AR + PLSD...-R



ACCESSORIES

PLSD Plenum box with lateral circular connection. It includes supports to hang from the ceiling. Made in galvanised steel.

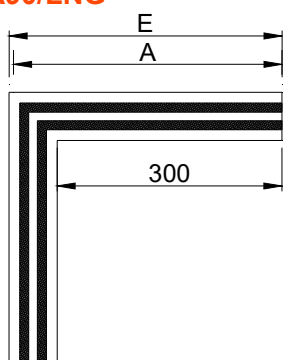
...-R Air flow damper in the spigot.

.../AIS/ Plenum box with thermal insulation inside. Foam density 25 kg / m³ ISO 845. Thermal conductivity 10° C_0,040 W / m°K EN 12667. Classified reaction to fire B-s1, d0 EN 13501-1.

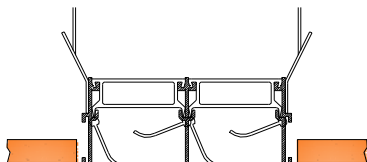
A90/LNG Inactive diffuser without end borders, forming a 90° angle.

slots	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,5		L ≤ 2		N	E
	H	D1	H	D1	H	D1	H	D1	H	D1		
1	256	1/158	256	1/158	256	1/158	256	1/158	256	2/158	69	68
2	256	1/158	256	1/158	256	1/158	256	2/158	256	2/158	108	107
3	296	1/198	296	1/198	296	2/198	296	2/198	296	2/198	147	147
4	296	1/198	296	1/198	296	2/198	296	2/198	296	2/198	186	186

A90/LNG



(D)



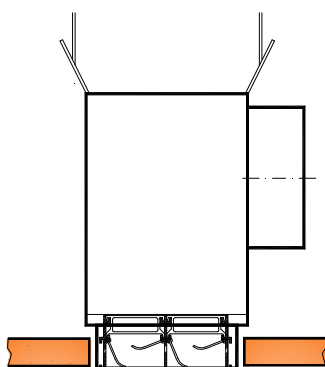
FIXING SYSTEMS

(D) Diffuser with brackets for ceiling suspension using threaded rods.

(PL) Screws to attach the diffuser to the plenum box and suspension of the assembly to the ceiling.

(PM) Crossbars to install the diffuser without plenum box in a false ceiling. Fixing by screws.

(PL)



FINISHES

AA Matt silver anodised.

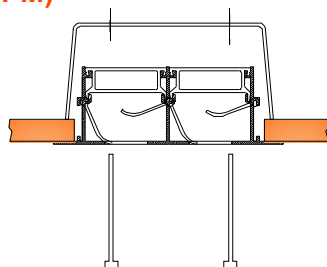
R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

RAL... Painted other RAL.

.../AB/ Vanes in white colour.

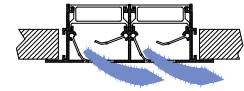
(PM)



SPECIFICATION TEXT

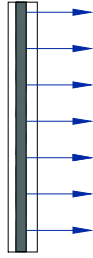
Supply and mounting linear slot diffuser series **LNG-AR+PLSD-R AA 2x2000** constructed from aluminium and anodised in matt silver. With lateral circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.

LNG SERIES

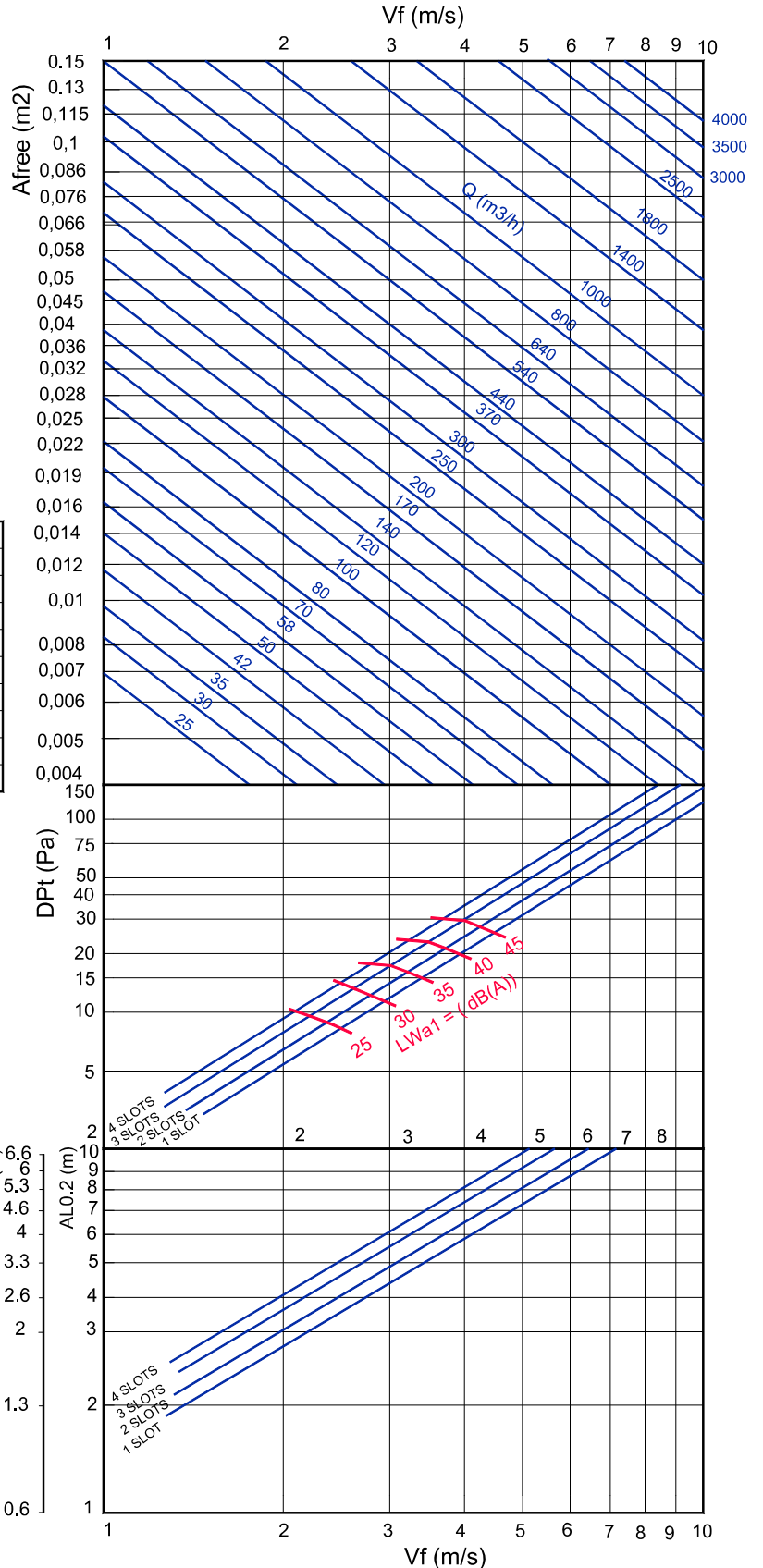


RECOMMENDED VELOCITY.

SLOTS	Vmin (m/s)	Vmax (m/s)
1	2.5	4.5
2	2.5	4.5
3	2.5	4
4	2.5	4



FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT: 1 DIRECTION.



FREE FACE AREA (m2).

	0.5 m	1 m	1.5 m	2 m
1	0.0043	0.0087	0.013	0.0174
2	0.0087	0.0174	0.0261	0.0348
3	0.013	0.0261	0.0391	0.0522
4	0.0172	0.0348	0.052	0.0696

CORRECTION FACTOR FOR Dpt AND Lwa1.

LNG-AR + PLSD-R

		0.5 m			1 m			1.5 m			2 m		
		100%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	0%
1	Dpt	0.95	2.35	3.15	1	1.4	2.2	1	1.4	2.2	1.1	2.5	3.3
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
2	Dpt	0.98	2.48	3.25	1	1.5	2.3	1	1.5	2.3	1.2	2.7	3.5
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
3	Dpt	0.96	2.26	3.36	1	1.3	2.4	1	1.3	2.4	1.3	2.4	3.5
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
4	Dpt	0.95	2.35	3.05	1	1.4	2.1	1	1.4	2.1	1.1	2.5	3.2
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5

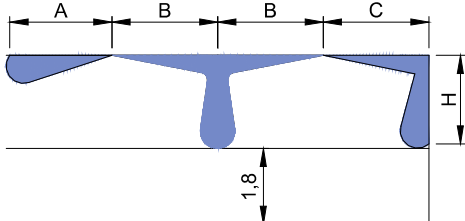
$$Dpt1 = Kp \times Dpt$$

$$Lwa1 = Lwa + Kf$$

CORRECTION FACTOR FOR THROW KL

	0.5 m	1 m	1.5 m	2 m
1	0.71	1	1.07	1.14
2	0.73	1	1.09	1.15
3	0.74	1	1.11	1.2
4	0.75	1	1.25	1.25

$$AL'02 = Kl \times AL02$$



$$AL_{0.2} = A$$

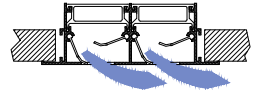
$$AL_{0.2} = B + H$$

$$AL_{0.2} = C + H$$

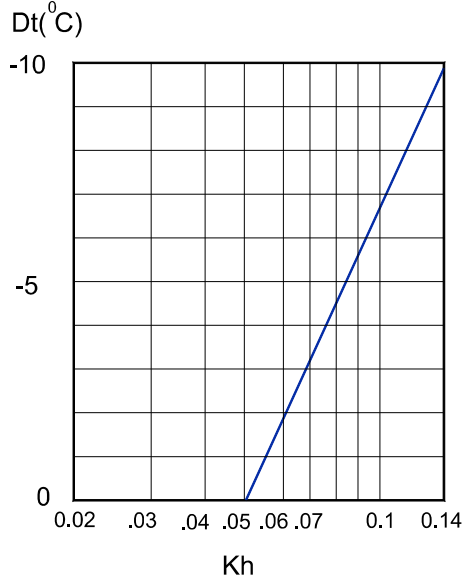
Note: In MadelMedia Octava band centre frequency in Hz.



LNG SERIES

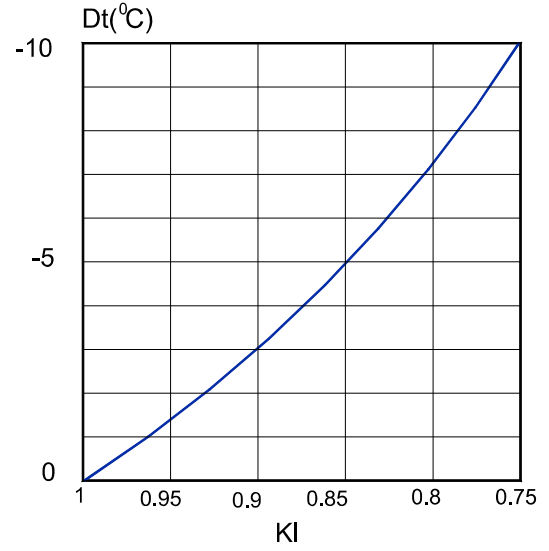


CORRECTION FACTOR FOR VERTICAL DIFFUSION (bv) FOR DT (-).

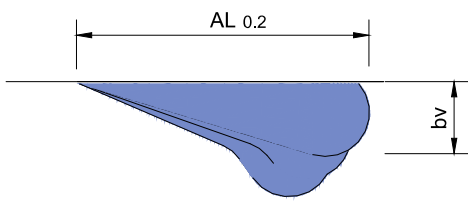


Kh = Correction factor for the vertical diffusion.

CORRECTION FACTOR FOR THROW (L0.2) DT (-).



KI = Correction factor for the throw.

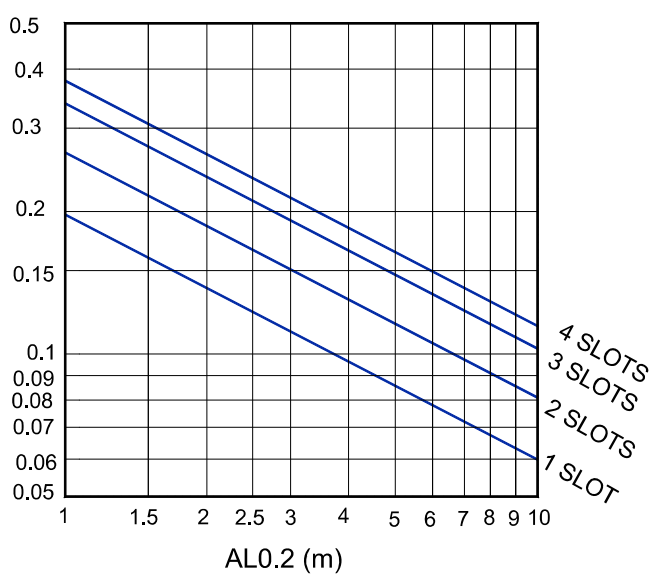


$$bv = Kh \times Al_{0.2}$$

$$AL'_{0.2} (Dt < 0) = KI \times AL_{0.2}$$

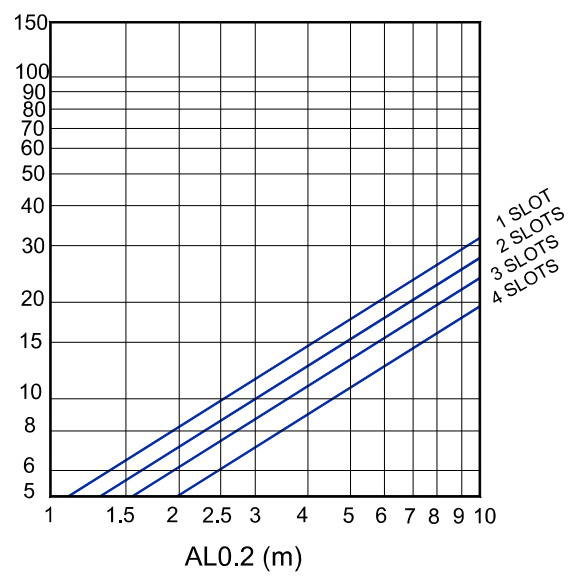
TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t_{room} - t_x}{t_{room} - t_{supply}}$$

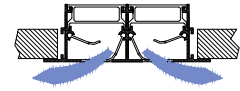


INDUCTION RATIO.

$$i = \frac{Q_r}{Q_0} = \frac{Q_{total\ at\ x}}{Q\ of\ supply}$$

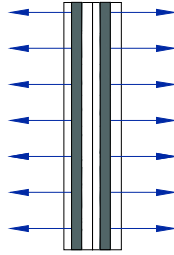


LNG SERIES



RECOMMENDED VELOCITY.

SLOTS	Vmin (m/s)	Vmax (m/s)
2	2.5	4.5
4	2.5	4



FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT: 2 DIRECTIONS.

FREE FACE AREA (m2).

	0.5 m	1 m	1.5 m	2 m
1	0.0043	0.0087	0.013	0.0174
2	0.0087	0.0174	0.0261	0.0348
3	0.013	0.0261	0.0391	0.0522
4	0.0172	0.0348	0.052	0.0696

CORRECTION FACTOR FOR DPt AND Lwa1.

		0.5 m			1 m			1.5 m			2 m		
		100%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	0%
2	Dpt	0.98	2.48	3.25	1	1.5	2.3	1	1.5	2.3	1.2	2.7	3.5
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
4	Dpt	0.95	2.35	3.05	1	1.4	2.1	1	1.4	2.1	1.1	2.5	3.2
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5

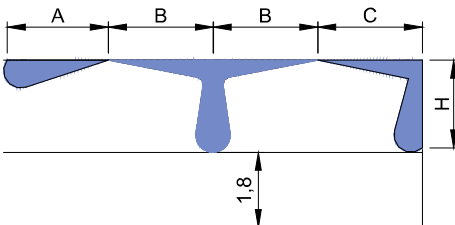
$$DPt1 = Kp \times DPt$$

$$Lwa1 = Lwa + Kf$$

CORRECTION FACTOR FOR THROW KL

	0.5 m	1 m	1.5 m	2 m
2	0,6	1	1.17	1.3
4	0.767	1	1.2	1.17

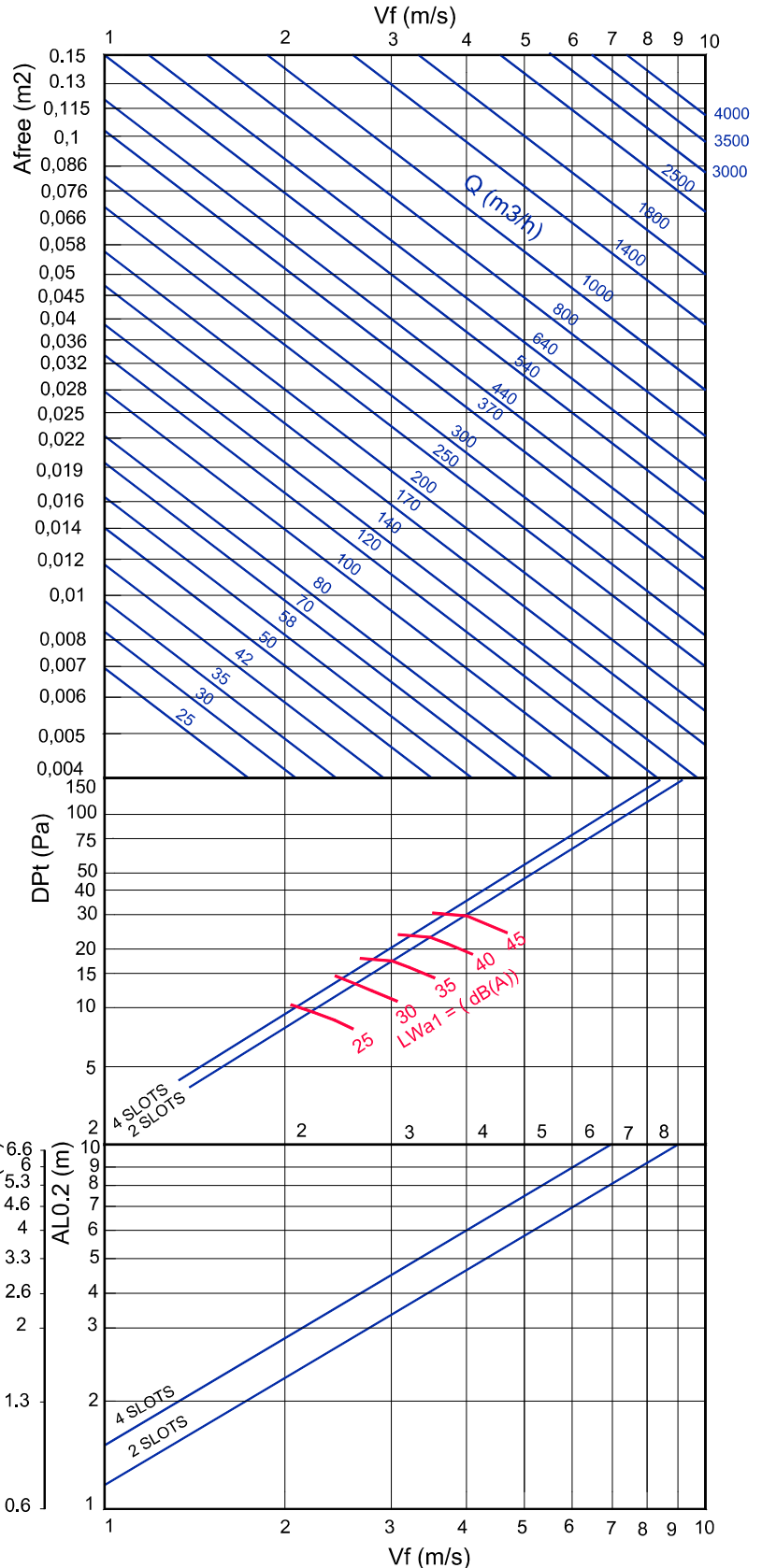
$$AL'02 = KI \times AL02$$



$$AL_{0.2} = A$$

$$AL_{0.2} = B+H$$

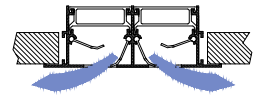
$$AL_{0.2} = C+H$$



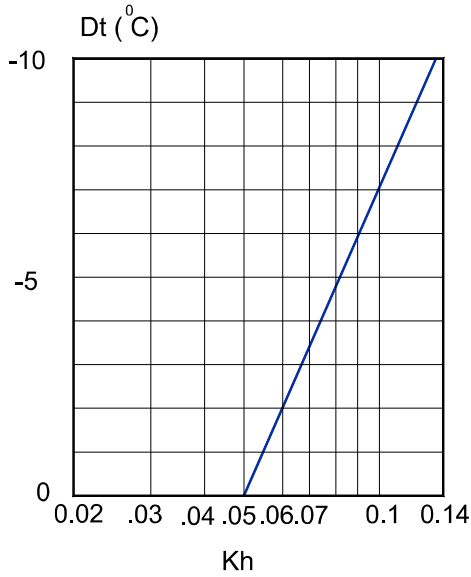
Note: In MadelMedia Octava band centre frequency in Hz.



LNG SERIES

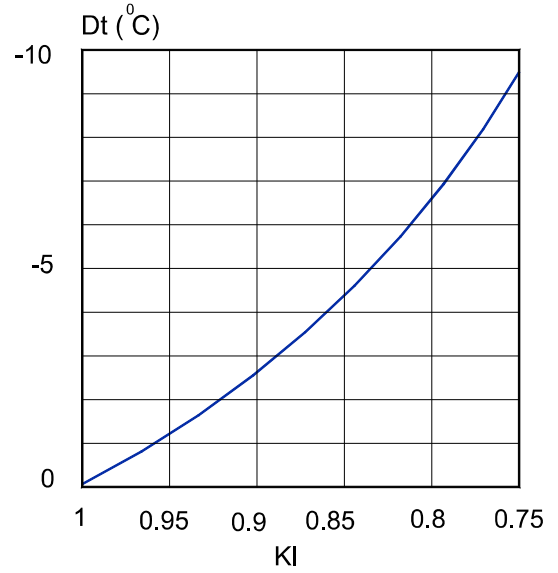


CORRECTION FACTOR FOR VERTICAL DIFFUSION (bv) FOR DT (-).

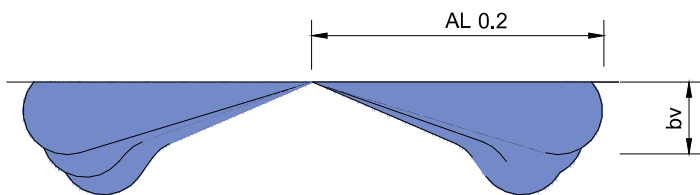


Kh = Correction factor for the vertical diffusion.

CORRECTION FACTOR FOR THROW (L0.2) DT (-).



Kl = Correction factor for the throw.

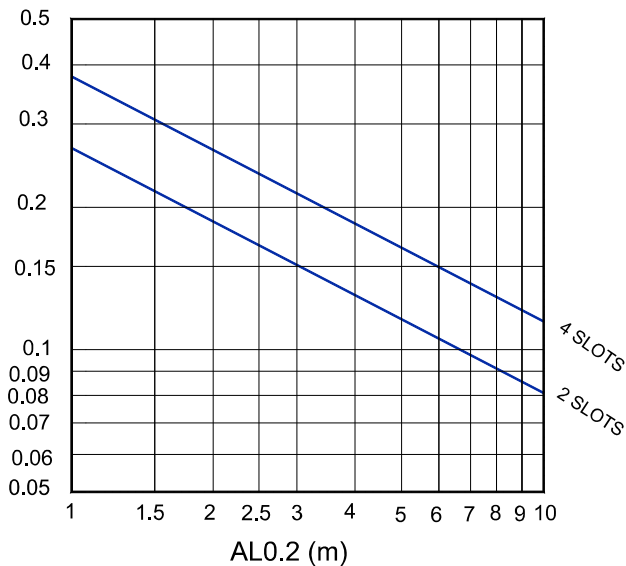


$$bv = Kh \times Al_{0.2}$$

$$AL'_{0.2} (Dt < 0) = Kl \times AL_{0.2}$$

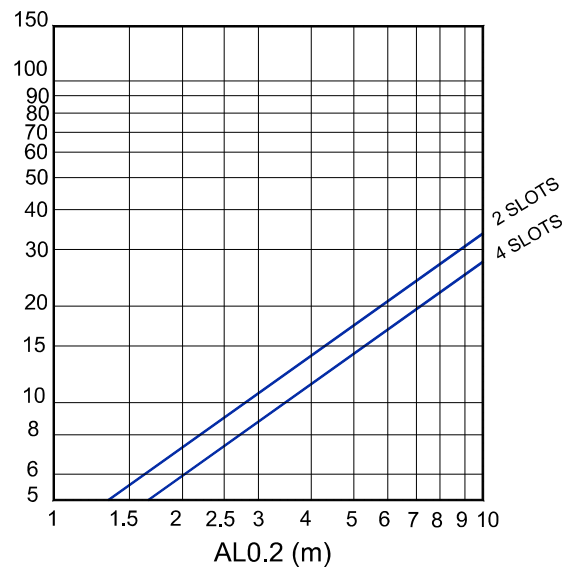
TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t_{room} - t_x}{t_{room} - t_{supply}}$$

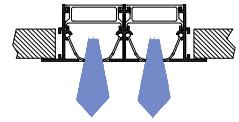


INDUCTION RATIO.

$$i = \frac{Q_r}{Q_0} = \frac{Q_{total\ at\ x}}{Q\ of\ supply}$$



LNG SERIES



RECOMMENDED VELOCITY.

SLOTS	Vmin (m/s)	Vmax (m/s)
1	2.5	4.5
2	2.5	4.5
3	2.5	4
4	2.5	4

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL: VERTICAL SUPPLY.

FREE FACE AREA (m2).

	0.5 m	1 m	1.5 m	2 m
1	0.0043	0.0087	0.013	0.0174
2	0.0087	0.0174	0.0261	0.0348
3	0.013	0.0261	0.0391	0.0522
4	0.0172	0.0348	0.052	0.0696

CORRECTION FACTOR FOR DPt AND Lwa1.

		0.5 m			1 m			1.5 m			2 m		
		100%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	0%
1	Dpt	0.95	2.35	3.15	1	1.4	2.2	1	1.4	2.2	1.1	2.5	3.3
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
2	Dpt	0.98	2.48	3.25	1	1.5	2.3	1	1.5	2.3	1.2	2.7	3.5
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
3	Dpt	0.96	2.26	3.36	1	1.3	2.4	1	1.3	2.4	1.3	2.4	3.5
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
4	Dpt	0.95	2.35	3.05	1	1.4	2.1	1	1.4	2.1	1.1	2.5	3.2
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5

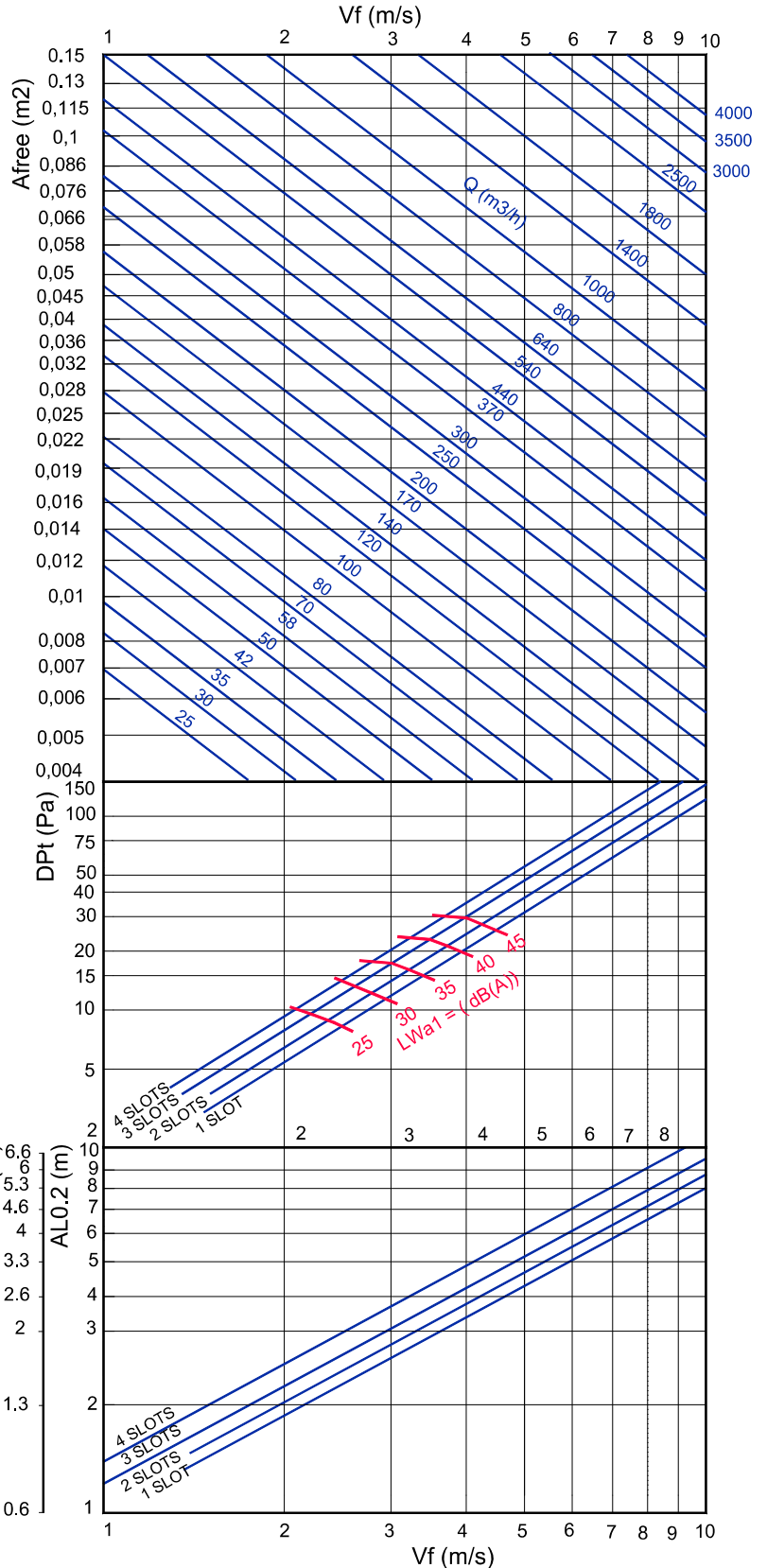
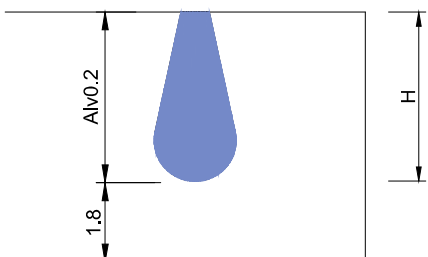
$$DPt1 = Kp \times DPt$$

$$Lwa1 = Lwa + Kf$$

CORRECTION FACTOR FOR THROW KL

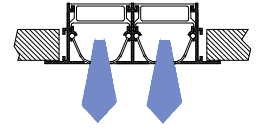
	0.5 m	1 m	1.5 m	2 m
1	0.7	1	1.1	1.2
2	0.72	1	1.15	1.25
3	0.72	1	1.12	1.2
4	0.74	1	1.25	1.25

$$ALv'0.2 = Kl \times ALv02$$



Note: In MadelMedia Octava band centre frequency in Hz.

LNG SERIES



CORRECTION FACTOR FOR VERTICAL THROW (Alv0,2) DT(+).

	D T(+5)	DT(+10)
1 SLOT	0.75	0.64
2 SLOTS	0.76	0.65
3 SLOTS	0.77	0.66
4 SLOTS	0.8	0.64

DT = T supply - T room.

EXAMPLE:

LSD 2SLOTS x 2m

Afree = 0.0348 m².

Vf = 3.1 m/s.

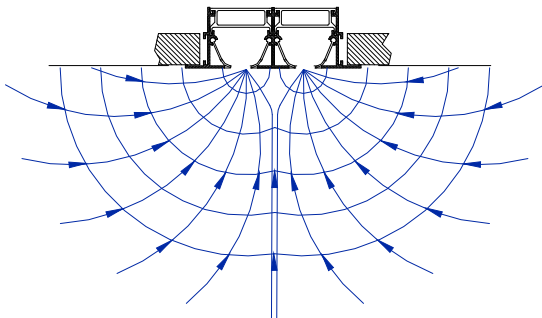
ALv 0,2 = 2.9 m.

ALv'02 = 1.1 x 2.9 = 3.19 m.

DT(+5) = 0.76 x 3.19 = 2.42 m.

DT (+10) = 0.65 x 3.19 = 2.07m.

Alv 0,2 (DT +) = Kv x Al 02



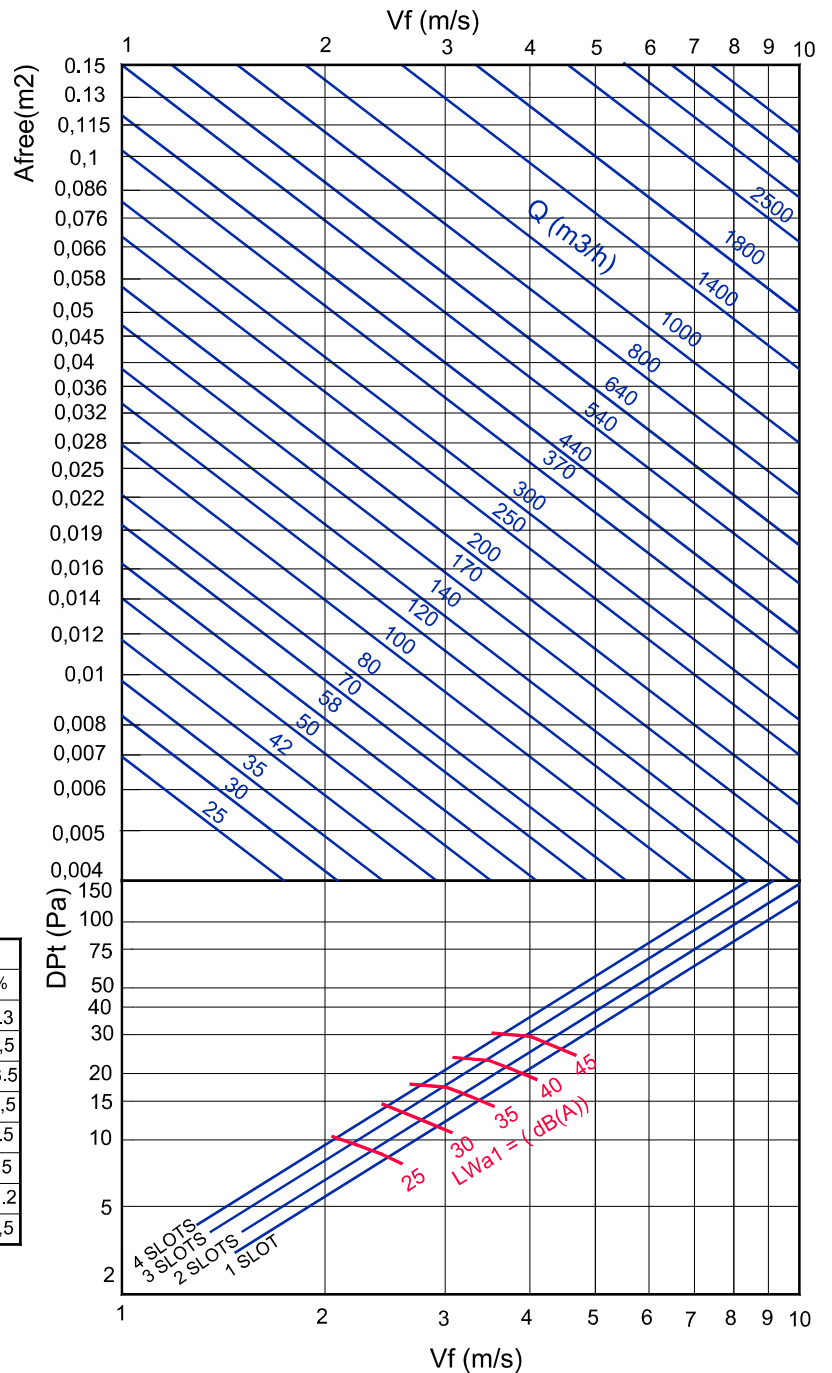
RECOMMENDED VELOCITY.

SLOTS	Vmin (m/s)	Vmax (m/s)
1	2	3.5
2	2	3.5
3	2	3
4	2	3

FREE FACE AREA (m²).

	0.5 m	1 m	1.5 m	2 m
1	0.0043	0.0087	0.013	0.0174
2	0.0087	0.0174	0.0261	0.0348
3	0.013	0.0261	0.0391	0.0522
4	0.0172	0.0348	0.052	0.0696

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.



CORRECTION FACTOR FOR Dpt AND Lwa1.

		0.5 m			1 m			1.5 m			2 m		
		100%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	0%
1	Dpt	0.95	2.35	3.15	1	1.4	2.2	1	1.4	2.2	1.1	2.5	3.3
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
2	Dpt	0.98	2.48	3.25	1	1.5	2.3	1	1.5	2.3	1.2	2.7	3.5
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
3	Dpt	0.96	2.26	3.36	1	1.3	2.4	1	1.3	2.4	1.3	2.4	3.5
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5
4	Dpt	0.95	2.35	3.05	1	1.4	2.1	1	1.4	2.1	1.1	2.5	3.2
	Lwa1	-	1,5	3,5	-	1,5	3,5	+1,5	+3	+5	+3	+4,5	+6,5

$$Dpt1 = Kp \times Dpt$$

$$Lwa1 = Lwa + Kf$$